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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,608	07/13/2006	Ian Hall	207,419	8874
38137 7590 08/08/2007 ABELMAN, FRAYNE & SCHWAB 666 THIRD AVENUE, 10TH FLOOR NEW YORK, NY 10017			EXAMINER BASINGER, SHERMAN D	
			ART UNIT 3617	PAPER NUMBER
			MAIL DATE 08/08/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/564,608

Applicant(s)

HALL ET AL.

Examiner

Sherman D. Basinger

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/11/06</u> .   | 6) <input type="checkbox"/> Other: ____.                          |

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## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 6 and 21-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Wasenius.

The vessel with the plurality of separate liquid cargo tanks is shown in figures 1a and 1b. That the tanks 2 are located below the deck plate is shown in figure 8. That middle tanks 2 have a highest point above the baseline of the ship is shown in figure 2. That a portion of the deck plate is located above each tank and each tank has a highest point available above the baseline of the ship is shown in figure 8. The plurality of apertures or slots in the deck plate communicating with the respective tank there below is shown by the broken lines at the lower end of expansion trunk as is shown in figure 2. Since trunk 10 of the middle tanks in figure 8 is located at the highest point of the tank above the baseline of the ship, the apertures would likewise be located as such. The trunk is in communication with pipelines 8 and 11 for venting the tank.

Figure 2 shows that the trunks 10 are located as far forward as is possible with respect to the tanks. The apertures in the deck are inherently positioned in either one or more than one of the deck plates.

3. Claim 21 is rejected under 35 U.S.C. 102 (b) as being anticipated by Jack.

The trunk is 19 and the vent pipeline is clearly shown in figure 2 at the top of the trunk 19.

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3-5, 7-13, 16-20 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wasenius.

Wasenius does not disclose that the slots have a sufficient area such that there is approximately less than a 0.5 pound per square inch pressure difference between the opposing tank side and trunk side of the deck plates when the tank is being loaded at 200% of its maximum load, that the slots are between 2 and 3 centimeters wide and one half of the length of a deck plate, that the trunk 10 has an interior volume of at least 2% of the volume of the respective tank there below for liquid cargo storage, that the apertures are located as far aft on the tank as is possible, that the trunk has dimensions of between about 10-40 meters in length, about 5-15 meters wide and about 2-3 meters high, that the trunk encloses a volume at least that required for compliance with maritime regulations for an expansion space for liquid cargo storage, that the expansion space of each trunk for fluid cargo storage is at least about 2% of the amount of under deck space for use as fluid cargo storage, and that the slots are at least one half the length of the deck plate.

However, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to modify the trunks and apertures or slots of Wasenius such that the slots have a sufficient area such that there is approximately less than a 0.5 pound per square inch pressure difference between the opposing tank side and trunk side of the deck plates when the tank is being loaded at 200% of its maximum load, that the slots are between 2 and 3 centimeters wide and one half of the length of a deck plate, that the trunk 10 has an interior volume of at least 2% of the volume of the respective tank there below for liquid cargo storage, that the apertures are located as far aft on the tank as is possible, that the trunk has dimensions of between about 10-40 meters in length, about 5-15 meters wide and about 2-3 meters high, that the trunk encloses a volume at least that required for compliance with maritime regulations for an expansion space for liquid cargo storage, that the expansion space of each trunk for fluid cargo storage is at least about 2% of the amount of under deck space for use as fluid cargo storage, and that the slots are at least one half the length of the deck plate. Motivation to make these modifications are found in the fact that the apertures and trunk are going to be made a dimension and volume to meet any requirements specified by a governing body so that the vessel can be used for what it is intended.

With regard to claim 20, the alternative vent line will be the line with valve 13 therein.

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With regard to claim 26, Wasenius does not disclose at least two separate expansion trunks 10 positioned on the deck plate and over the apertures. This limitation is met if each tank 2a and 2b is provided with two sets of apertures in the deck plate above each tank and a trunk 10 for each set of apertures as opposed to having only one set of apertures with one trunk for this set of apertures. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to provide two sets of apertures for each tank 2a, 2b of Wasenius with a trunk 10 positioned over each set of apertures. Motivation to do so is to provide two tank hatches 10 to be filled as described in the abstract of Wasenius. More oil can be carried and yet the necessary under pressure can still be maintained.

6. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wasenius in view of Butterworth.

Wasenius does not disclose that trunk 10 includes a crude oil washing pipeline and is configured for being connected with one or more removable crude oil washing machines or a permanently installed crude oil pipeline washing machine. Butterworth discloses that trunk 5 includes crude oil washing pipeline 12 and that the trunk 5 is configured for being connected with removable crude oil washing machine 7. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to modify trunk 10 of Wasenius to such that it includes a crude oil washing pipeline similar to 12 of Butterworth and is configured for being connected with one or more removable crude oil washing machines similar to 7 of Butterworth or a permanently installed crude oil pipeline washing machine. Motivation to do so is to provide means to clean and scale the tanks 2 of Wasenius. With regard to claim 15, see the trunks 10 shown in figure 2 of Wasenius.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sherman D. Basinger whose telephone number is 571-272-6679. The examiner can normally be reached on Monday through Friday, 5:30 a.m. to 2:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samuel J. Morano can be reached on 571-272-6684. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sherman Basinger/  
Sherman Basinger, PE  
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8/6/07